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Docket No.: 181-037

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT OPERATIONS

In re Application of:

Peter Dronzek

Group Art Unit: 1771

Serial No.: 10/505,392

Examiner: Chang, Victor S.

Filed: August 20, 2004

For: CARD INTERMEDIATES

New York, NY 10036
August 4, 2009

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

This appeal brief is being filed in response to the final rejection that was mailed April 8, 2008.

(i) *Real party in interest.* The real party in interest is Polymeric Converting, Inc.

(ii) *Related appeals and interferences.* There are no known related appeals or interferences.

(iii) *Status of claims.* Claims 1, 3-6 and 8-11 have been rejected under 35 U.S.C. §103(a). Claims 12-53 have been withdrawn from consideration.

(iv) *Status of amendments.* There are no unentered amendments.

(v) *Summary of claimed subject matter.* The application contains ten claims. Claim 1 is directed to a card intermediate made of a number of layers that allow the card to be cut out by a diecut without removal of the card from the intermediate until it is desired to separate the card from the laminate. The purpose of the invention is to provide a highly removable card that is firmly held in place until the user desires to remove the card.

The card intermediate has the following elements:

- (i) a business form layer of paper or film having an upper surface and a lower surface;
- (ii) optionally, a first thin film layer, adhesively secured to the upper surface of said business form layer;
- (iii) a second thin film layer having an upper surface and a lower surface, the upper surface being permanently adhesively secured to the lower surface of said business form layer; the lower surface of the second thin film layer having a permanent adhesive and being designated as permanent interface A;
- (iv) a third thin film layer having an upper surface and a lower surface, the upper surface being adhesively secured, directly, or through an underlying thin coated layer to the lower permanent interface A of said second thin film layer (iii) at a separable interface designated as interface B; and
- (v) a removable card, having edges and defined in said first thin film layer (ii), said business form layer (i), and said second film layer (iii) by a diecut extending through said layers (i), (ii), and (iii) but not through said third thin film layer (iv), wherein the card is

formed by a die cut on a patterned treated area of selective variable adhesion through an adhesive and selective surface-treatment of a part of the area of the upper surface of said third layer (iv) with a corona, flame or plasma treatment or a combination thereof whereby the selective differential surface-treatment increases the adhesion in said part of the areas that are treated, as compared to areas where no surface treatment is applied such that the adhesion at separable interface B is always less than the adhesion at permanent interface A, said patterned treated area having alternating areas of easy and tight separation strength that extend under an area defined by said diecut and which covers from at least about 10 percent to about 90 percent of the surface of either the upper surface of said third layer (iv), the lower surface of layer (iii) or both of said surfaces said patterned treated area allowing for easy separation of said card at any area of said form by lifting an edge of said card while maintaining sufficient adhesion to prevent pre-separation of said card.

Claim 3 points out a thickness for the film layers wherein the film layer or layers comprise a polyester film, 0.2 to 7 mils thick and claim 4 points out a card intermediate where the business form layer comprises paper stock of 15 to 150 pound weight.

Claim 5 points out an article An article having means for providing selective variable adhesion through variable surface treatment is selected from corona-treatment, flame-treatment, plasma-treatment, or a combination of any of the foregoing treatments.

Claim 6 is directed to an article as wherein said treatments of claim 5 are carried out under conditions which produce a measurable difference in adhesion of at

least 1 dyne/cm as measured at the time of treatment.

Claim 8 specifies that the treated area of the pattern covers from at least about 40 to about 60 percent of the surface and the untreated area covers from at least about 60 to about 40 percent of the surface.

Claims 9 and 10 point out an area that the pattern of the treated area comprises a geometric form in general and particular patterns that are specifically described.

Claim 11, which is dependent on claim 1, points out an article where the surface tension of the surface treatment is set to a predetermined level by increasing or decreasing the power of the treatment, by increasing or decreasing the exposure time of the treatment, or by increasing or decreasing the distance between the treatment source and the surface to which said treatment is applied.

(vi) *Grounds of rejection to be reviewed on appeal.* The following rejection is to be reviewed on appeal:

Should claims 1, 3-6 and 8-11 be rejected under 35 U.S.C. §103(a) over Fischer (U.S. 6,328,340) in view of Hoffman (U.S. 4,879,430) and evidenced by Caputo et al. (U.S. 4,840,270)?

(vii) *Argument.*

Fischer, the primary reference, discloses a specific form that has a detachable card element held in place with an adhesive which is a part of an adhesive system that transfers the adhesive from the element to which it is applied to the card. In Fischer, all of the surface was provided with an adhesive because the surface of the element to which the adhesive was originally applied was treated according to col. 3, lines 27-31 of Fischer.

Fischer relied upon a peelable adhesive that is transferred to the card as the card is removed. Since the peelable adhesive is transferred to and stays on the back of the removable card, it causes the removed card to stick to other cards which is a distinct disadvantage.

Claim 1 of the present application points out a business form with a detachable card where the adhesion of the card to the business form is controlled by a pattern of (a) selective variable adhesion that is achieved by the use of alternating areas of easy and tight separation by a method comprising a corona, flame or plasma treatment of a surface. In the method defined by amended claim 1 of the present application, the pattern is based on a combination of treated and untreated areas that facilitate the removal of the card without the need to use a peelable adhesive because the adhesion properties of the surface have been modified. The selective adhesion imparted by the pattern, as defined in claim 1, is achieved by creating a surface where certain areas have no treatment and thus no enhanced adhesion as well as other areas which are

treated to provide sufficient enhanced adhesion so that the card will not fall off the form prior to when it is desired to remove the card from the surface of the form.

There is no teaching or suggestion in the Fischer patent that makes it obvious to modify less than ***all of the surface of the layer*** of the card which contacts the adhesive. This is evident from the Fischer method which requires that a peelable adhesive be used which must be removed with the card (col. 5, lines 12-15). Fischer does not teach a method of surface treatment and fails to make obvious the use of corona, flame or plasma treatment method as recited in claim 1 on the film surface which contacts the adhesive.

The Hoffman patent is concerned with a patterned adherent film structure which is intended for use in wrapping meat so that the film will adhere to another layer of film. This reference at col. 1, lines 6-24:

Another problem in the cook-in packaging art is that uniform surface treatment of the intended interior surface portions of a cook-in container, which treatment is carried out for the purpose of improving the capacity of highly proteinaceous foods to adhere thereto, appears to detract from the ability of the treated surface to adhere by heat sealing to similarly treated surfaces of plastics having even an identical composition. This is important because filled cook-in plastic containers are typically sealed before being exposed to cooking temperatures by heat sealing adjacent inner wall surface portions together. Since steam pressures within the sealed container can develop, for example, in the cooking of beef at

about 200.degree. F., unless durable container seals are formed, they tend to open during cooking with undesirable effects. Where the interior surface portions are treated with corona discharge, gamma radiation, ozone, etc., slight alteration in treated surface composition results. The chemical nature of this alteration is not known, but is believed to involve at least some oxidation (perhaps partially oxidized) surfaces brought together and heat sealed, the resulting seal tends to be weaker than a corresponding seal formed between untreated surfaces. This effect thus presents a problem in providing containers for cook-in of meat and other highly proteinaceous foods when the container inside walls are to be adherent to such foods in order to achieve, for example, a purge-free cooked-in product package. (emphasis added)

The above quoted section of the Hoffman patent demonstrates that Hoffman is only concerned with the adhesion of irradiated or corona treated film that is heat sealed to another layer of irradiated or corona treated film. It was observed that corona treatment of the films that Hoffman was working with would cause the bond strength to be weakened between layers of the same film and not increased. Hoffman disclosed that it was known that irradiated or corona treated film would not adhere well to the same film and the answer to this lack of adhesion was to irradiate or corona treat one surface of a film in a pattern so that the film would show enhanced adhesion of one surface to another in the non-treated area. At col. 3, lines 13-18, Hoffman discloses the problem of seal failures caused by the positioning of a sealed treated film against a sealed treated film.

Claim 1 points out that "the card is formed by a die cut on a patterned treated area of selective variable adhesion through an adhesive and selective surface-treatment of a part of the area of the upper surface" of the third layer. Thus, claim 1 points out that the treated area is on the film and not on the adhesive. Nothing in Hoffman suggests treating a surface in a pattern to modify the properties of the film for easy release of a diecut element.

Caputo has been cited as disclosing a resealable label flap where a selected zone of a surface has been "corona treated (differentially treated)". The concept of differential treatment that provides alternating areas of easy and tight separation that extend under a card area defined by a diecut, as recited in claim 1, is not disclosed by Caputo.

It is apparent that Caputo is concerned with increasing adhesion under all of the area 20 that is to be contacted with a tab edge of label 18 to make tab edge of label 18 unremovable by treating all of the surface to provide a tightly bonded edge 18 in order to make the tab of label 18 unremovable. If the Caputo teaching of corona treatment is applied to the Fisher peelable adhesive location, Fisher would be rendered inoperative as the degree of adhesion would be increased. Claim 1 points out that the claimed structure has a removable piece that is removable as disclosed in the specification at page 8, lines 18-20. This recitation makes it clear that coupon or label is removable even though a pattern of a treated area is applied under a removable coupon or label. Caputo applies a corona treatment to all of the surface of the area that is contacted with the adhesive. This non-selective corona treatment does not suggest the making of a pattern of treated and untreated areas to a diecut

piece as recited in claim 1 and the claims that are dependent on claim 1.

Since there is no reason to combine Fisher, Hoffman and Caputo together other than the applicants' specification and even when these references are considered alone or in combination, they fail to make the amended claims obvious.

The text of claim 1 recites that a "**patterned treated area**" is placed on the surface of thin film layer (iv) which has selective variable adhesion. Caputo treats the part of the surface of the snack food bag to which the label portion 18 of label flap 14 of a resealable label is attached. The area is **completely treated and the concept of selective treatment is not even remotely suggested**. The Caputo method treats all of the area 20 under the flap so that the flap cannot be easily removed as recited in amended claim 1. No pattern is formed that extends under a card area or any area that would correspond to the card area of claim 1.

The Caputo patent is directed to the art of resealable label flaps where a pressure sensitive adhesive is placed on the surface of the removable seal so that the removable seal may be repositioned on the surface of the container. Caputo applies an unpatterned corona treatment only in the area that is positioned under the label flap for the purpose of increasing the adhesive anchoring characteristics under all of the area contacted by the label flap portion 18 of label flap 14. (col. 2, line 45-55). This area is not formed in a pattern of selective variable adhesion of "alternating easy and tight strength". The Caputo concept is to provide in the corona treated zone, the same level of adhesion, without any pattern, as defined in claim 1 of the present application.

The Caputo patent does not teach how to make a removable card intermediate as it is limited to making

resealable bags. One skilled in the art would never consider resealable bags as a source or inspiration for information as to how to make a card intermediate.

The text of claim 1 recites that the alternating areas of easy and tight separation that extend under the card area defined by the diecut, This recitation points out a concept that is not made obvious by Caputo's use of a zone of undifferentiated or non-patterned corona treatment at the point where the resealable flap is to be positioned.

The Caputo flap element 18 is never intended to be removed during the life of the Caputo bag as that would defeat the reason for enhancing the bond strength of the flap. The use of a pattern of differential adhesion under the flap of the Caputo bag is directly contrary to the teachings of Caputo. Hoffman, which selectively treats a film with a corona discharge, uses the selective corona treatment to enhance the heat seal bonding of identical film layers in non-treated areas and does not apply the corona discharge to a film to allow for enhanced bonding in the treated area and easy removal of an adhesively bound film in the non treated area to facilitate easy removability of the card element when it is desired to remove the card from the laminate while holding it firmly in place through mailing, sorting and handling.


The Examiner has stated that since Caputo relates to the control of adhesive effects and Fischer teaches that different adhesive effects can be achieved through suitable process control, neither Caputo nor Fischer make obvious the placing of a selective pattern of a corona discharge, flame or plasma treatment on a film surface.

Claim 1 does not use process controls to control adhesion; the use of discrete areas having different adhesion are not suggested by any method of controlling the overall adhesion of a continuous peelable layer. The references are not properly combinable based on the

teachings found in the references. The Caputo patent has been applied for the limited purpose of its teaching of the corona treatment method of modifying adhesion which does not make obvious the differential pattern as defined in amended claim 1. The differential method of Caputo is to completely treat the area where the flap is to be anchored as no other treatment is applied at that location. The language of claim 1 of the present application requires a patterned treated area to be formed that extends under the area defined by the diecut. Thus, Caputo's "differential treatment" is concentrated at one location for the purpose of providing a permanent anchorage for the flap 14. There is not the slightest suggestion that a pattern of **variable adhesion** is to be formed under an area where a card is adhesively positioned in order to make the card removable. The teachings of Hoffman and Caputo with regard to the use of corona treatment do not make the claimed methods obvious because they only deal with the use of corona treatments for applications in which a permanent bond is to be formed and do not suggest the making of a removable die cut element.

For these reasons, it is requested that this ground of rejection be reversed and patent protection be allowed to an unobvious improvement in the art.

Respectfully submitted,


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(viii) *Claims Appendix.*

1. A card intermediate, comprising: (i) a business form layer of paper or film having an upper surface and a lower surface; (ii) optionally, a first thin film layer, adhesively secured to the upper surface of said business form layer; (iii) a second thin film layer having an upper surface and a lower surface, the upper surface being permanently adhesively secured to the lower surface of said business form layer; the lower surface of the second thin film layer having a permanent adhesive and being designated as permanent interface A; (iv) a third thin film layer having an upper surface and a lower surface, the upper surface being adhesively secured, directly, or through an underlying thin coated layer to the lower permanent interface A of said second thin film layer (iii) at a separable interface designated as interface B; and (v) a removable card, having edges and defined in said first thin film layer (ii), said business form layer (i), and said second film layer (iii) by a diecut extending through said layers (i), (ii), and (iii) but not through said third thin film layer (iv), wherein the card is formed by a die cut on a patterned treated area of selective variable adhesion through an adhesive and selective surface-treatment of a part of the area of the upper surface of said third layer (iv) with a corona, flame or plasma treatment or a combination thereof whereby the selective differential surface-treatment increases the adhesion in said part of the areas that are treated, as compared to areas where no surface treatment is applied such that the adhesion at separable interface B is always less than the adhesion at permanent interface A, said patterned treated area having alternating areas of easy and tight separation strength that extend under an area defined by said diecut and which covers from at least about 10 percent to about 90 percent of the surface of either the upper surface of said third layer (iv), the

lower surface of layer (iii) or both of said surfaces said patterned treated area allowing for easy separation and removal of said removable card at any area of said form by lifting an edge of said card while maintaining sufficient adhesion to prevent pre-separation of said card.

2. (Canceled)

3. An article as in claim 1, wherein the film layer or layers comprise a polyester film, 0.2 to 7 mils thick.

4. An article as in claim 1, wherein the business form layer comprises paper stock of 15 to 150 pound weight.

5. An article as in claim 1, wherein the means for providing selective variable adhesion through variable surface treatment is selected from corona-treatment, flame-treatment, plasma-treatment, or a combination of any of the foregoing treatments.

6. An article as in claim 5, wherein said treatment is carried out under conditions which produce a measurable difference in adhesion of at least 1 dyne/cm as measured at the time of treatment.

7. (Canceled)

8. An article as in claim 1, wherein the pattern of the treated area covers from at least about 40 to about 60 percent of the surface and the untreated area covers from at least about 60 to about 40 percent of the surface.

9. An article as in claim 1, wherein pattern of the treated area comprises a geometric form.

10. An article as in claim 9, wherein said geometric form is selected from a saw-tooth, a sine-wave, a herring-bone, a closed curve, and a polygon.

11. An article as in claim 1, wherein the surface tension of the surface treatment is set to a predetermined level by increasing or decreasing the power of the treatment, by increasing or decreasing the exposure time of the treatment, or by increasing or decreasing the distance between the treatment source and the surface to which said treatment is applied.

(ix) *Evidence Appendix*

No evidence has been submitted in connection with this application.

(x) *Related Proceedings Appendix.*

There are no related proceedings.